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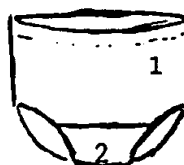
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>6</sup> : A41B 9/00, A61F 13/16, A41B 9/12		A1	(11) International Publication Number: <b>WO 96/36248</b> (43) International Publication Date: 21 November 1996 (21.11.96)
(21) International Application Number: PCT/CA96/00284 (22) International Filing Date: 9 May 1996 (09.05.96) (30) Priority Data: 2,149,477 16 May 1995 (16.05.95) CA (71)(72) Applicants and Inventors: McMAHON-AYERST, Marilyn [CA/CA]; R.R. #2, Lunenburg, Ontario K0C 1R0 (CA). CLEMENT, Doreen [CA/CA]; R.R. #1, St. Andrews West, Ontario K0C 2A6 (CA). MALONEY-DAWSON, Brenda [CA/CA]; R.R. #3, Lunenburg, Ontario K0C 1R0 (CA).		(81) Designated States: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, ARIPO patent (KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).  Published <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>	

(54) Title: LEAKPROOF AND BREATHABLE UNDERGARMENTS AND SWIM WEAR

(57) Abstract

In an undergarment known as or referred to as panties, briefs, or underwear, it is known to be usually worn underneath clothing for hygiene purposes. In a swimsuit or swim wear it is known to usually be worn for water and outdoor activities or anytime as the person deems it necessary as an outer garment. In this invention, we have woven into or laminated to the fabric, (all types of fabrics or nonwoven material) a laminate or substance which is leak proof, and breathable. This invention is designed with feminine care in mind, especially during the female menstrual cycle. It can also be used



at any time by a person female or male who feel the need to wear a protective leak proof, breathable garment. All females have various menstrual cycles and flow at various rates and during the heavier flowing days, it is very stressful worrying if you are going to leak through the feminine menstrual product to your outer clothing. Females have to dress accordingly, i.e. wearing dark clothing, long shirts, or long sweaters, etc. in the event of seepage through to their outer garments; to help minimize the embarrassing situation. During sleeping it is almost impossible to prevent leakage onto garments and bedding. By wearing this ultimate wear called Finally (a leak proof breathable under garment or swim wear) it will prevent leakage, and it is breathable thereby allowing continued comfort.

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LEAKPROOF AND BREATHABLE UNDERGARMENTS AND SWIM WEAR  
Specification

"This invention is an protective garment to prevent leakage and is breathable, and will be worn as an undergarment panty or brief or underwear and in the swim wear it will be worn as an outer garment."

"This invention will be made from any fabric or nonwoven material which will have a laminate or substance woven into the fabric or nonwoven material will be laminated to the fabric or nonwoven material and each seam will be sealed to prevent leakage and ensure breathability. This invention will be made in all sizes, styles, and colours of feminine and masculine underwear, panties, briefs and swim wear.

## Drawings

"In drawings which illustrate embodiments of the invention Figure 1 is a female full panty with the laminate or substance woven completely into the fabric or nonwoven material, with a cotton gusset, or other fabric gusset.

Figure 2 is a female bikini panty with the laminate or substance woven completely into the fabric or nonwoven material, with a cotton gusset, or other fabric or nonwoven material gusset.

Figure 3 is female panty which only the outer side of the panty is laminated with the substance or laminate, with a cotton gusset, or other fabric or nonwoven material gusset.

Figure 4 is double layer female panty with #1 woven or laminated with laminate or substance and #2 completely fabric or nonwoven material with a cotton gusset, or other fabric or nonwoven material gusset.

Figure 5 is a full female swimsuit with the laminate or substance woven or laminated into the complete fabric or nonwoven material with a cotton gusset, or other fabric or nonwoven material gusset.

Figure 6 is a full female swimsuit with the laminate or substance woven or laminated in the buttocks with a cotton gusset, or other fabric or nonwoven material gusset.

Figure 7 is a female bikini with the complete suit with the laminate or substance woven or laminated with a cotton gusset, or other fabric or nonwoven material gusset.

Figure 8 is a female bikini with the bottom portion with the laminate or substance woven or laminated with a cotton gusset, or other fabric or nonwoven material gusset.

Figure 9 mens briefs with the complete brief with the laminate or substance woven or laminated with a cotton gusset, or other fabric or nonwoven material gusset.

Figure 10 mens boxer with the complete boxer with laminate or substance woven or laminated with a cotton gusset, or other fabric or nonwoven material gusset.

Figure 11 mens bikini with the complete brief with the laminate or substance woven or laminated, with a cotton gusset, or other fabric or nonwoven material gusset.

Figure 12 is a mens brief which is laminated with laminate or substance on the outer side only with a cotton gusset, or other fabric or nonwoven material gusset.

Figure 13 is double layer mens brief with #1 woven or laminated with laminate or substance and #2 completely fabric with a cotton gusset, or other fabric or nonwoven material gusset.

Figure 14 is a male swimsuit with the laminate or substance woven or laminated into the complete fabric with a cotton gusset, or other fabric or nonwoven material gusset.

## We Claim

- Claim 1. A close fitting secondary garment to be worn over existing feminine protective means, said secondary garment selected from the group of panties, briefs, underwear or undergarments and outerwear such as swim wear, said garments fabricated as a laminate of an inner thin, lightly absorbent launderable material and an outer thin, launderable material that is LEAKPROOF and breathable whereby the wearer is protected from secondary flows of menstrual fluid from said existing feminine protection, by the inner lamination which absorbs any spots or light flows, and by the outer semipermeable membrane-type laminate which prevents any of the liquid of said secondary flow from striking through the secondary garment, while the vapour permeability of the semipermeable membrane allows fluid transfer across the secondary garment allowing the secondary flow to dry on the first said inner material whereby the wearer is protected by the entire garment from secondary flows of menstrual fluids.
- Claim 2. The garment of claim 1 wherein the inner and outer materials are bonded together by stitching or adhesives.
- Claim 3. The garment of claim 1 wherein the inner and outer materials are connected together only at their peripheries.

- Claim 4. The garment of claim 1, 2 or 3 wherein extra absorbency provided by an absorbent gusset in the crotch area.
- Claim 5. The garment of claim 4 wherein said gusset is detachable from the remainder of the garment.
- Claim 6. The garment of claims 1 to 3 or 5 wherein the secondary garment is made for non-woven material.
- Claim 7. The garment of claim 1 to 3 or 5 wherein the secondary garment is made from woven material.
- Claim 8. The garment of claim 4 wherein the secondary garment is made from woven material.
- Claim 9. The garment of claim 4 wherein the secondary garment is made form non-woven material.
- Claim 10. The garment of claims 8 or 9 wherein the seams of the secondary garment are sealed and liquid-proof.
- Claim 11. The garment of claims 6 wherein the seams of the secondary garment are sealed and liquid-proof.
- Claim 12. The garment of claim 7 wherein the seams of the secondary garment are sealed and liquid-proof.



Claim 13. The garment of claims 1 to 12 wherein the leakproof breathable material is a woven component of the fabric.

Claim 14. A close fitting secondary garment to be worn over existing feminine protective means, said secondary garment selected from the group of panties, briefs, underwear or undergarments and outerwear such as swim wear, said garments fabricated of a laminate lightly absorbent launderable material that is LEAKPROOF and breathable whereby the wearer is protected from secondary flows of menstrual fluid from said existing feminine protection, by the lamination which absorbs any spots or light flows, and the semipermeable membrane-type laminate which prevents any of the liquid of said secondary flow from striking through the secondary garment, while the vapour permeability of the semipermeable membrane allows fluid transfer across the secondary garment allowing the secondary flow to dry on the inside of the secondary garment whereby the wearer is protected by the entire garment from secondary flows of menstrual fluids.

Claim 15. The garment of claim 14 wherein the inner and outer materials are bonded together by stitching or adhesives.

Claim 16. The garment of claim 14 wherein the inner and outer materials are connected together only at their peripheries.

- Claim 17. The garment of claim 14, 15, or 16 wherein extra absorbency provided by an absorbent gusset in the crotch area.
- Claim 18. The garment of claim 17 wherein said gusset is detachable from the remainder of the garment.
- Claim 19. The garment of claims 14 to 16 or 18 wherein the secondary garment is made for non-woven material.
- Claim 20. The garment of claim 14 to 16 or 18 wherein the secondary garment is made from woven material.
- Claim 21. The garment of claim 17 wherein the secondary garment is made from woven material.
- Claim 22. The garment of claim 17 wherein the secondary garment is made form non-woven material.
- Claim 23. The garment of claims 21, or 22 wherein the seams of the secondary garment are sealed and liquid-proof.
- Claim 24. The garment of claims 19 wherein the seams of the secondary garment are sealed and liquid-proof.
- Claim 25. The garment of claim 20 wherein the seams of the secondary garment are sealed and liquid-proof.
- Claim 26. The garment of claims 14 to 25 wherein the leakproof breathable material is a woven component of the fabric.

Figure 1



Figure 2



Figure 3

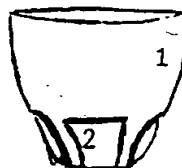


Figure 4



Figure 5

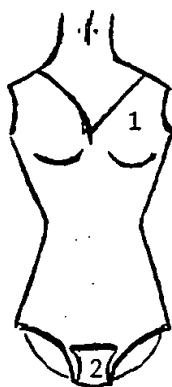


Figure 6

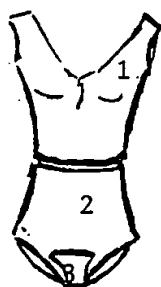


Figure 7

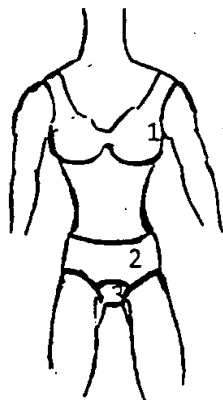


Figure 8

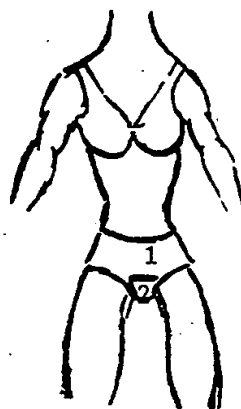


Figure 9

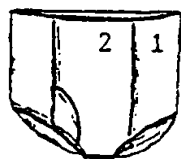


Figure 10

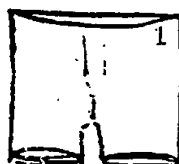


Figure 11

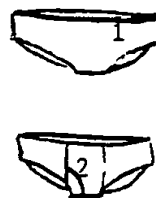


Figure 12

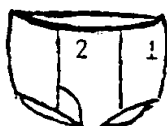
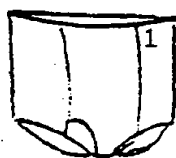
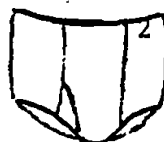


Figure 13



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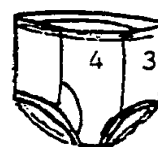
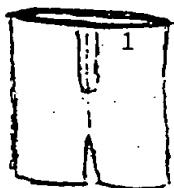


Figure 14



# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/CA 96/00284

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 6 A41B9/00 A61F13/16 A41B9/12

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 6 A41B A61F A41D

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## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US,A,5 155 867 (NORVELL) 20 October 1992  see column 1, line 47-54 see column 2, line 19-31 see column 3, line 17 - column 4, line 10; figures 1,2  ---	1,2,14, 15
Y	US,A,4 194 041 (GORE ET AL.) 18 March 1980 see column 2, line 25-44 see column 3, line 5-16; claims 1,5,6  ---	1-26
Y	US,A,5 098 419 (GOLD) 24 March 1992 see column 3, line 36-44 see column 4, line 25-37; claims 1,4-7  ---	1-26
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A	EP,A,0 327 823 (DARLINGTON FABRICS) 16 August 1989 see column 1, line 23 - column 2, line 13	1,2,4,5
X	see column 3, line 16 - column 4, line 1	14,15, 17,18
A	--- US,A,4 813 950 (BRANCH) 21 March 1989 see column 2, line 61 - column 3, line 38	1-3,14, 16
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